

December 13, 1974

To: CHR Records, Case 40-009

From: J. Rundo

As a result of our recent detection of ^{241}Am in the bones of case 40-010, I have re-examined the spectral data taken when Eckerman and I visited in February 1973, to search for evidence of ^{241}Am in vivo.

Two energy bands were examined: 24-32 keV and 32-63 keV. The first of these includes counts due to the γ -ray from ^{241}Am at 26.4 keV and the peak at 30 keV due to escape from the proportional counter of a xenon x-ray after photo-electric absorption of a 60 keV γ -ray from ^{241}Am . The second band includes counts due to forward and back-scattered quanta and to primary γ -rays at 60 keV. Neither band includes a significant contribution from ^{239}Pu .

The results are set out in the following table.

Detail	Counts/min 24-32 keV	Counts/min 32-63 keV
Counter background	3.3 ± 0.2	4.2 ± 0.2
Skull, left 40-009	4.5 ± 0.5	5.9 ± 0.6
Skull, left, control	4.7 ± 0.5	5.4 ± 0.5
Right upper abdomen, 40-009	7.5 ± 0.6	7.5 ± 0.6
Left upper abdomen, 40-009	5.8 ± 0.6	5.9 ± 0.6
Left upper abdomen, control	5.3 ± 0.5	6.0 ± 0.6

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I draw the following conclusions:

- (i) There were no significant counts attributable to ^{241}Am in the measurement at the skull.
- (ii) There were significant counts attributable to ^{241}Am in the measurement at the liver.

The counting-rates suggest a liver content in the range 2-10 nCi but this is very approximate.

hmb

cc: R. E. Toohey A. F. Stehney R. E. Rowland

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